Listing of the Claims

1. (Currently Amended) A label printer system for a disk storage medium including a thermally-sensitive layer and embedded disk information with pre-recorded data formed on at least a portion of a surface of said disk storage medium, the label printer system comprising;

a laser head for reading and writing positioned below the disk storage medium and for determining an orientation of the disk storage medium;

a rotational drive for rotating said disk storage medium;

a transverse drive including a̶ the laser head for moving a laser substantially transversely with respect to said disk storage medium;

a memory including a symbol set and a label printer driver; and

a processor communicating with said memory, said rotational drive, said transverse drive, and said laser, and wherein said processor uses said label printer driver to control said rotational drive and said transverse drive in order to thermally write said symbol set to said thermally-sensitive layer of said disk storage medium if said disk storage medium is detected as inverted using said laser at a laser power read from the pre-recorded data with the laser.

2. (Original) The system of claim 1, wherein said memory further includes a rotational position variable that tracks a rotational position of said disk storage medium.

3. (Original) The system of claim 1, wherein said memory further includes a transverse position variable that tracks a transverse position of said laser head.

4. (Original) The system of claim 1, wherein said memory further includes a disk orientation variable that tracks an orientation of said disk storage medium.

Claims 5-6 (Cancelled).

7. (Currently Amended) A label printing method for a disk storage medium having embedded information with pre-recorded data, comprising the steps of:

loading a symbol set to a processor controlling a disk drive, with said symbol set including one or more predetermined symbols or graphics to be written to said disk storage medium;

reading the pre-recorded data from the disk storage medium;

heating with a laser, using the pre-recorded data to control power to the laser, a thermally-sensitive layer formed on at least a portion of an upper surface of said disk storage medium; and

manipulating said laser with respect to said disk storage medium;

wherein said symbol set is used to controls the manipulating step in order to write said one or more predetermined symbols or graphics to said thermally-sensitive layer, wherein said disk drive includes a read laser and a writing laser positioned below said disk storage medium, and further comprising the preliminary step of detecting an orientation of said disk storage medium, and wherein the heating step is performed by said writing laser and the loading, heating, and manipulating steps are performed if said disk storage medium is inverted.

Claims 8-9 (Cancelled).

10. (Original) The method of claim 7, further comprising the steps of:
rotating said disk storage medium;
transversely moving said laser with respect to said disk storage medium;
tracking a rotational position of said disk storage medium in a rotational position variable; and
tracking a transverse position of said laser in a transverse position variable;
wherein said rotational position and said transverse position are used by said processor for manipulating said laser with respect to said disk storage medium.

11. (Original) The method of claim 7, further comprising the step of reading one or more alignment marks on said disk storage medium.

12. (Currently Amended) A label printing method for a disk storage medium, comprising the steps of:

loading a symbol set to a processor controlling a disk drive, with said symbol set including one or more predetermined symbols or graphics to be written

5   to said disk storage medium;

reading one or more types of embedded information of pre-recorded data on said disk storage medium;

heating with a laser a thermally-sensitive layer formed on at least a portion of an upper surface of said disk storage medium; and

10   manipulating said laser with respect to said disk storage medium;

wherein said symbol set in conjunction with said one or more types of embedded information of pre-recorded data is used to control the manipulating step in order to write said one or more predetermined symbols or graphics to said thermally-sensitive layer, wherein said laser comprises a writing laser positioned

15   below said disk storage medium, and further comprising the preliminary step of detecting an orientation of said disk storage medium, and wherein the heating step is performed by said writing laser and the loading, heating, and manipulating steps are performed if said disk storage medium is inverted.

20   13. (Previously Presented) The method of claim 12, wherein said one or more types of embedded information of pre-recorded data are used to determine the location of one or more alignment marks which are used to align a completed label according to a predetermined orientation.

25   14. (Previously Presented) The method of claim 13, wherein said one or more alignment marks are pre-printed on said thermally-sensitive layer.

15. (Previously Presented) The method of claim 13, wherein said one or more alignment marks were previously written to a data contents of said disk

30   storage medium.

16. (Currently Amended) <u>A label printing method for a disk storage medium, comprising the steps of:</u>

<u>loading a symbol set to a processor controlling a disk drive, with said symbol set including one or more predetermined symbols or graphics to be written</u>

5   <u>to said disk storage medium;</u>

<u>reading one or more types of embedded information of pre-recorded data on said disk storage medium;</u>

<u>heating with a laser a thermally-sensitive layer formed on at least a portion of an upper surface of said disk storage medium; and</u>

10   <u>manipulating said laser with respect to said disk storage medium;</u>

<u>wherein said symbol set in conjunction with said one or more types of embedded information of pre-recorded data is used to control the manipulating step in order to write said one or more predetermined symbols or graphics to said thermally-sensitive layer; wherein said one or more types of embedded</u>

15   <u>information of pre-recorded data are used to determine the location of one or more alignment marks which are used to align a completed label according to a predetermined orientation; and</u>~~The method of claim 13,~~ further comprising the preliminary step of printing said one or more alignment marks to said thermally-sensitive layer before the loading step.

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17. (Currently Amended) A label printing method for a disk storage medium, comprising the steps of:

loading a symbol set to a processor controlling a disk drive, with said symbol set including one or more predetermined symbols or graphics to be written
5 to said disk storage medium;

reading one or more types of embedded information of pre-recorded data on said disk storage medium;

heating with a laser a thermally-sensitive layer formed on at least a portion of an upper surface of said disk storage medium; and
10 manipulating said laser with respect to said disk storage medium;

wherein said symbol set in conjunction with said one or more types of embedded information of pre-recorded data is used to control the manipulating step in order to write said one or more predetermined symbols or graphics to said thermally-sensitive layer; wherein said one or more types of embedded
15 information of pre-recorded data are used to determine the location of one or more alignment marks which are used to align a completed label according to a predetermined orientation; and~~The method of claim 13, further comprising the step of~~ ejecting said disk storage medium according to a predetermined orientation using said one or more alignment marks.
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18. (Currently Amended) <u>A label printing method for a disk storage medium, comprising the steps of:</u>

<u>loading a symbol set to a processor controlling a disk drive, with said symbol set including one or more predetermined symbols or graphics to be written</u>
5 <u>to said disk storage medium;</u>

<u>reading one or more types of embedded information of pre-recorded data on said disk storage medium;</u>

<u>heating with a laser a thermally-sensitive layer formed on at least a portion of an upper surface of said disk storage medium; and</u>
10 <u>manipulating said laser with respect to said disk storage medium;</u>

<u>wherein said symbol set in conjunction with said one or more types of embedded information of pre-recorded data is used to control the manipulating step in order to write said one or more predetermined symbols or graphics to said thermally-sensitive layer; wherein said one or more types of embedded</u>
15 <u>information of pre-recorded data are used to determine the location of one or more alignment marks which are used to align a completed label according to a predetermined orientation; and</u>~~The method of claim 13, further comprising the step of~~ ejecting said disk storage medium according to a predetermined orientation using digital data stored on said disk storage medium.
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Claims 19-20 (Cancelled).

21. (Original) The method of claim 12, further comprising the steps of:
rotating said disk storage medium;
25 transversely moving said laser with respect to said disk storage medium;
tracking a rotational position of said disk storage medium in a rotational position variable; and
tracking a transverse position of said laser in a transverse position variable;
wherein said rotational position and said transverse position are used by
30 said processor for manipulating said laser with respect to said disk storage medium.

Claim 22 (Cancelled).

23. (Currently Amended) A label printing method for a disk storage medium having embedded information with pre-recorded data, comprising the steps of:

loading a symbol set to a processor controlling a disk drive, with said symbol set including one or more predetermined symbols or graphics to be written

5   to said disk storage medium;

reading one or ~~more alignment~~more alignment marks on said disk storage medium;

heating with a laser a thermally-sensitive layer formed on at least a portion of an upper surface of said disk storage medium at a laser power read from the

10   pre-recorded data with the laser; and

manipulating said laser with respect to said disk storage medium;

wherein said symbol set in conjunction with said one or more alignment marks used to control the manipulating step in order to write said one or more predetermined symbols or graphics to said thermally-sensitive layer; and

15   ejecting said disk storage medium according to a predetermined orientation using digital data stored on said disk storage medium.

24. (Currently Amended) A labeling apparatus for disk storage medium having a thermally sensitive layer, one or more alignment marks, and embedded disk

20   information with pre-recorded data, comprising:

means for reading the pre-recorded data from the disk storage medium;

means for heating on the thermally sensitive layer in conjunction with the pre-recorded data; ~~and~~

means for manipulating said means for heating with respect to said disk

25   storage medium in order to write on or more predetermined symbols or graphics to said thermally-sensitive layer in conjunction with the one or more alignment marks; and

means for indicating that the disk storage medium is oriented in the labeling apparatus in an upright or inverted position.

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Claim 25 (Cancelled).

26. (Previously Presented) The labeling apparatus of claim 24 wherein said means for heating is a laser.

27. (Previously Presented) The labeling apparatus of claim 24 wherein said means for heating is a thermal writing head.

28. (Previously Presented) The labeling apparatus of claim 24, further comprising:

      means for detecting existing symbols or graphics; and

      means for detecting an empty area on the thermally sensitive layer.

29. (Previously Presented) The labeling apparatus of claim 28, further comprising:

means for allowing a user to view the existing symbols or graphics; and

means for allowing the user to modify the existing symbols or graphics.

30. (Previously Presented) The labeling apparatus of claim 24, wherein said means for manipulating includes means for forming a label composed of different colors disposed in a pattern within the thermally sensitive layer.

31. (Currently Amended) A ~~The~~ labeling apparatus ~~of claim 29, further comprising~~ for a disk storage medium having a thermally sensitive layer, one or more alignment marks, and embedded disk information with pre-recorded data, comprising:

        means for reading the pre-recorded data from the disk storage medium;

        means for heating on the thermally sensitive layer in conjunction with the pre-recorded data;

        means for manipulating said means for heating with respect to said disk storage medium in order to write on or more predetermined symbols or graphics to said thermally-sensitive layer in conjunction with the one or more alignment marks;

        means for detecting existing symbols or graphics;

        means for detecting an empty area on the thermally sensitive layer;

        means for allowing a user to view the existing symbols or graphics;

        means for allowing the user to modify the existing symbols or graphics; and

        means for test printing on the thermally sensitive layer to provide precise position information of the pattern of different colors.

32. (Previously Presented) The labeling apparatus of claim 24, further comprising means for storing a label data file within the thermally sensitive layer.

33. (Currently Amended) A ~~The~~ labeling apparatus ~~of claim 24, further comprising~~ for a disk storage medium having a thermally sensitive layer, one or more alignment marks, and embedded disk information with pre-recorded data, comprising:

        means for reading the pre-recorded data from the disk storage medium;

        means for heating on the thermally sensitive layer in conjunction with the pre-recorded data;

        means for manipulating said means for heating with respect to said disk storage medium in order to write on or more predetermined symbols or graphics to said thermally-sensitive layer in conjunction with the one or more alignment marks; and

        means for ejecting the disk storage medium according to a predetermined orientation based on the one or more alignment marks.